

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number
WO 2004/042999 A1

(51) International Patent Classification⁷: **H04L 9/32, 12/56**

(74) Agent: **ERICSSON AB**; Patent Unit Core Networks, Telefonplan/Älvsjö, S-126 25 Stockholm (SE).

(21) International Application Number:
PCT/SE2002/002021

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:
6 November 2002 (06.11.2002)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (*for all designated States except US*): **TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)** [SE/SE]; S-126 25 Stockholm (SE).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

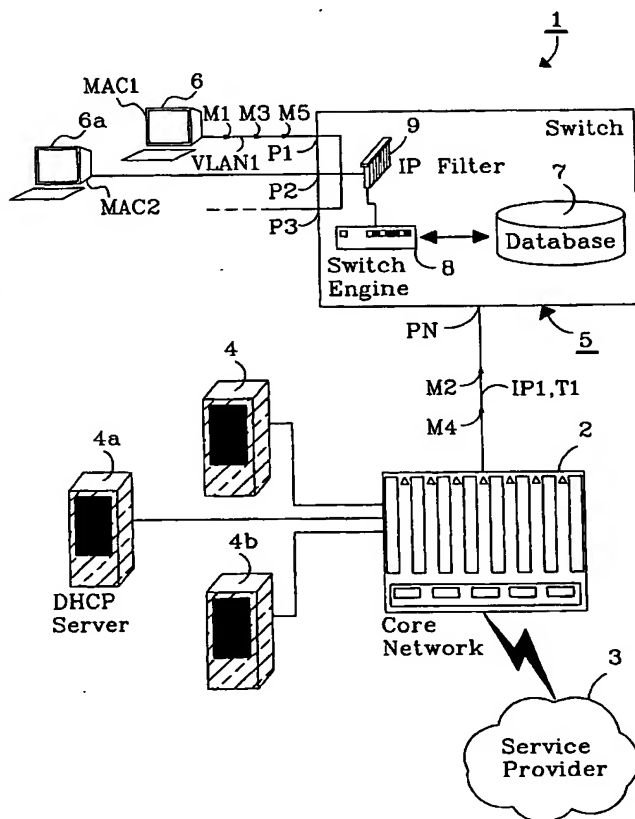
(75) Inventors/Applicants (*for US only*): **NESZ, Peter** [SE/SE]; Järnlundsvägen 39, S-120 60 Årsta (SE). **JOHANSSON, Thomas** [SE/SE]; Vattumännens gata 131, S-136 62 Haninge (SE). **JUHL, Michael** [DK/DK]; Wesselsvej 4, 2th, DK-7500 Holstebro (DK).

Published:

— with international search report

[Continued on next page]

(54) Title: METHOD AND ARRANGEMENT FOR PREVENTING ILLEGITIMATE USE OF IP ADDRESSES



(57) Abstract: Illegitimate use of IP addresses is counteracted. A network (1) includes a switch (5) with ports (P1,P2,P3) to subscribers (6,6A) and a port (PN) to a core network (2) with DHCP servers (4, 4a,4b). The switch includes a database (MAC1, MAC2), port numbers (P1, P2) and VLAN identities (VLAN1, VLAN2) for the subscribers (6, 6A) and the filter has a list over trusted DHCP servers. Initially only DHCP messages from the subscribers are allowed. When the subscriber (6) requests (M1, M3) for an IP address it is checked that it is a DHCP message with valid subscriber values (MAC1, P1, VLAN1). A respond (M2, M4) with an allocated IP address (IP1) and lease time interval (T1) is checked to come from a trusted DHCP server. If so, a list in the filter (9) with correct information is dynamically generated (MAC1, P1, VLAN1, IP1, T1). A message (M5) from the subscriber (6) with false IP address is discarded by the filter. Attempts by the subscriber to use false IP address are counted and a warning signal is generated.

BEST AVAILABLE COPY

WO 2004/042999 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

BEST AVAILABLE COPY